

## **Global Trade Analysis Project (GTAP) Model for Low Carbon Fuel Standard (LCFS)**

In order to run a version of the GTAP model used for the analysis of global land use impacts related to biofuels analyzed by Purdue/UC Berkeley for the Air Resources Board (ARB), a user needs GTAP data base license and GEMPACK model solver. GTAP Data Base license is offered by the developer, Center for Global Trade Analysis, Department of Agricultural Economics, Purdue University. The GEMPACK is offered by the Monash University, Australia. The following will help those interested in running a version of GTAP model, used in the ARB analysis, to go through the steps in purchasing the required licenses and instructions on where to download and how to run the model.

### **GTAP Data Base License**

To run the GTAP model the GTAP Data Base license is required.

#### **What is the GTAP Data Base?**

The GTAP Data Base is a fully documented global economic data base which contains complete bilateral trade information, transport and protection linkages among regions for all GTAP commodities.

The GTAP Data Base is most commonly used with the GTAP Model and RunGTAP program.

Go to the link below and click on the data base order form:

<https://www.gtap.agecon.purdue.edu/databases/v7/default.asp>

Please register as a new member (existing member login directly). Follow instructions online to order the GTAP Data Base.

### **Installation Requirements**

A Pentium PC with a hard disk, at least 256 Mb of RAM, Microsoft Windows 98, 2000, XP or Vista.

### **GEMPACK License**

GTAP is formulated and solved using GEMPACK, a flexible system for solving applied general equilibrium (AGE) models. RunGTAP, a program developed by Mark Horridge at the Centre of Policy Studies, Monash University, is a visual interface to various GEMPACK programs. To run large GTAP model with RunGTAP it is necessary to purchase the GEMPACK solver license. GEMPACK is developed at the Centre of Policy Studies, Monash University. The licensee recommends that users purchase the introductory version, which is the least expensive. This allows the user to run the GTAP model used by Air Resource Board (ARB). An Introductory license costs AUD \$380 (approximately USD \$250 as of March 2009, <http://www.monash.edu.au/policy/gpprice.htm>). An application form and a payment via credit card is required prior to receiving a license. You can fill the form provided below, and fax to Monash University.

CREDIT CARD PAYMENT FOR GEMPACK

**Fax or post this to:**  
**(do not email)**

Att: Louise Pinchen  
Centre of Policy Studies, Monash University  
Clayton Victoria 3800, Australia

Fax: (from overseas) +61 3 9905 2426 (within Australia) 03 9905 2426

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**Ordering GEMPACK:**

***Version***

☐ Source Code    ☐ Limited Exec.    ☐ Unlimited Exec.    ☐ Other  
☐ New Licence    ☐ Upgrade or    ☐ Licence Renewal  
☐ PC or    ☐ UNIX

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We will acknowledge receipt of your payments details by email. If you don't receive an acknowledgement within 3 working days please contact us immediately.  
We will also send your paper receipt by mail to the address you give above.

**Archived Experiment details for LCFS: Corn Ethanol, Sugarcane Ethanol and Soybean Biodiesel.**

Experiments can be replicated using two RunGTAP archives. These archives include all the experiment details required to replicate GTAP model runs for ARB.

**Note: You can run these experiments with RunGTAP software only if you have purchased GEMPACK license as instructed above.**

RunGTAP program can be downloaded for free at:  
<https://www.gtap.agecon.purdue.edu/products/rungtap/default.asp>

The URL for RunGTAP archive containing experiment details for corn ethanol and soybean biodiesel land use impacts analyses is at:  
[https://www.gtap.agecon.purdue.edu/private/secured.asp?Sec\\_ID=551](https://www.gtap.agecon.purdue.edu/private/secured.asp?Sec_ID=551).

The URL for RunGTAP archive containing experiment details for sugarcane ethanol land use impacts analysis is at:  
[https://www.gtap.agecon.purdue.edu/private/secured.asp?Sec\\_ID=550](https://www.gtap.agecon.purdue.edu/private/secured.asp?Sec_ID=550).